MODULE 6: Assessing the Potential Transferability of the Innovation

The purpose of the module is to help reduce the uncertainty about an innovation's expected consequences and determine its rate of adoption. In 1962, Everett Rogers wrote the pioneering work, *Diffusion of Innovations[1]*, which presents a workable framework for diffusing innovations or innovative thoughts over time. Rogers= work provides us with a systematic approach to understanding the nature of innovations and the existing conditions and culture necessary for accepting, adopting, and implementing innovations. This transferability module is based upon Rogers= innovation-diffusion model, which has five components: 1) relative advantage, 2) compatibility, 3) complexity, 4) trialability, and 5) observability.

I. Relative Advantage
1. Compared to the traditional way of doing business, what has been the measurable impact (positive and/or negative) of the innovation with regard to:
>   a   Environmental protection
>   b   Organizational management
>   c   Economic impacts
>   d   Expedited action
>   e   Public involvement
>   f   Accountability
>   g   Environmental justice
>   h   Administrative burden
>   i   Other areas

2. Who benefits from the innovation?
>   a   What do they gain?

3. Who incurs costs as a result of the innovation?
>   a   What costs do they incur?

4. What additional data are necessary to inform determination of the relative advantage of the innovation?

II. Compatibility
5. To what extent is the innovation consistent with existing organizational beliefs, values, and/or management approaches?

6. What is the level of support for the innovation from:
>   a.   Within EPA
>   b.   The affected entity or entities
>   c.   Other regulated entities

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[1]Rogers, E. *Diffusion of Innovations.* 4th Edition. The Free Press, New York: 1995.

      d. State agencies
      e. Federal agencies
      f. Local community
      g. Environmental NGOs
      h. Environmental Justice groups
      i. Local government

7. To what extent has a similar innovation been tested before?
      a. Different sector or industry
      b. Different media
      c. Different State, EPA Region, local government, Tribe
      d. Different community

8. Among existing practitioners, to what extent does the innovation support organizational goals, (i.e., department, office or divisional goals, community goals)?

9. Among existing practitioners, to what extent are organizational changes necessary to enable widespread use of the innovation (what specific changes are necessary)?

10. Among potential practitioners, to what extent does a broader user market or audience exist for the innovation?

11. Among potential users, to what extent does the innovation need modifications to be used more broadly (what specific changes are necessary)?

12. Who else might use or be interested in the innovation (e.g., regulated entities not originally contemplated as users of the innovation, or regulators who might be able to transform the innovation in a creative way for other purposes)?
      a.   Other regulated entities
      b.   Other regulators (Tribes, local State, EPA Region, EPA Headquarters)
      c.   Communities

III.   Ease of Adoption
13. How readily understood is the innovation?

14. To what extent is assistance necessary, and available, to understand and use the innovation?

15. If the innovation needs to be brokered, what assistance products are available?
      a.   Are in development
      b.   Need to be created

IV.   Trialability
16. To what extent can the innovation be tried on a temporary basis (i.e., one month, one year, etc.)?

17. To what extent can the innovation be tried on a limited scale (i.e., fewer facilities initially or with fewer regulatory authorities)?

V.   Observability
18. To what extent are innovation results apparent to others?

VI.   Personal Experience and Observations
19. To what extent do you consider the innovation to be an improvement over the traditional way of doing business? In what way(s) was the innovation an improvement?

20. Is the innovation old enough to have a full understanding of its advantages and disadvantages?
    a. If not, when will it be possible to gain a full understanding of the advantages and disadvantages of the innovation?

21. What are the primary lessons learned from testing and analyzing the innovation that pertain to its broad-scale application?

22. What is the potential for broader application of the innovation?
    a. Could the innovation be used to address another problem?

23. What are the primary barriers to broader application of the innovation?

24. What are the critical implementation elements needed to overcome the barriers to broader application of the innovation?

25. In your judgment, how would the innovation best be applied?
    a. What steps could be taken to facilitate more widespread application of the innovation?
    b. What steps could reduce the transaction costs of the diffusion?
    c. What elements should be scaled-up?
    d. What elements should be changed?
    e. How might other practitioners be identified?
    f. Are there unique circumstances that could impact broader application of the innovation (e.g., window of opportunity)?
26. Are there resource limitations, if any, which would constrain broad-scale application?

27. At what level – national, State, or local – should the innovation be applied?
    a. What are the appropriate mechanisms for such application?

Innovation-Diffusion Model: Using a Transferability Scale
The ranking table should be used to emphasize the strengths of the innovation and to continue to improve on the weaknesses in order to help transfer the innovation. The table can also be used to help identify priority innovations for scale-up. If the user has multiple innovations, but limited resources, the ranking table can help assist decisions to scale-up those innovations which are highly

transferable first.

Transferability Scale			
Innovation-Diffusion Components	**High**	**Moderate**	**Low**
Relative Advantage			
Compatibility			
Ease of Adoption[1]			
Trialability			
Observability			
[1] For ease of adoption, "high" responses are positively related to an innovation's rate of adoption; whereas "low" responses are negatively related).			